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(54) Title: AMPHOTERIC AND CATIONIC FLUORESCENT WHITENING AGENTS

(57) Abstract: Abstract A compound of the formula wherein A₁ and A₂ each, independently of one another, represent -SO₃ or -SO₃M, where M represents hydrogen, an alkaline or alkaline earth metal, ammonium or alkylammonium, B₁ and B₂ each, independently of one another, represent the moiety in which R₁ represents hydrogen, a straight-chain C₁-C₁₂alkyl or branched C₃-C₁₂alkyl group which C₂-C₁₂alkyl and C₃-C₁₂alkyl group, respectively, may be interrupted by one or two heteroatoms and is unsubstituted or substituted by one or two -OH, -OC₁-C₄alkyl, -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -N-pyrrolidino, -N-piperidino, -N-morpholino or -N*(C₁-C₄alkyl)₃ groups and R₂ represents C₁-C₄alkyl, C₂-C₄hydroxyalkyl, -CH₂CONH₂, -CH₂OOH or -CH₂OOO C₁-C₄alkyl or, alternatively, B₁ and B₂ each, independently of one another, represent a group of the formula in which R₃, R₄ and R₅ each, independently of each other, represent hydrogen, C₁-C₄alkyl, C₂-C₄hydroxyalkyl, the group -X'-NR₆R₇ or the group -X'-N*R₃R₆R₇, whereby at least one of the substituents R₄ and/or R₅ represents -X'-NR₆R₇ or -X'-N*R₃R₆R₇, X and X' each, independently of each other, represent a straight-chain C₂-C₈alkylene or branched C₃-C₈alkylene chain, which is unsubstituted or substituted by one or two -OH or -C(=O)- groups, R₆ and R₇ each, independently of each other, represent hydrogen, C₁-C₄alkyl or, together with the nitrogen atom to which they are bound, complete a pyrrolidino, piperidino or morpholino ring and R₂ is as previously defined and each D₁ and D₂, independently of one another, are either defined as for B₁ and B₂ or represent halogen, -NH₂, C₁-C₄monoalkyl- or dialkylamino, said alkyl groups being unsubstituted or substituted by C₁-C₄alkoxy, amino, mono- or di-C₁-C₄alkylamino or tri-C₁-C₄alkylammonium; C₂-C₄hydroxyalkylamino, C₂-C₄di (hydroxyalkyl)amino, anilino, an aniline monosulphonic acid or sulphonamide residue or a 5- or 6-membered, saturated heterocyclic ring or, alternatively, mixtures of compounds of formula (1), a process for their preparation and the use thereof as fluorescent whitening agents, especially for paper.

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